

# OVERVIEW OF THE CHINESE PROJECT ON “GENERATION AND APPLICATION OF GLOBAL PRODUCTS OF ESSENTIAL LAND VARIABLES”

S. Liang<sup>\*a</sup> w. Yuan<sup>b</sup> Q. Xiao<sup>c</sup> M. Ma<sup>d</sup> x. Zheng<sup>e</sup> S. Liu<sup>f</sup>  
X. Zhao<sup>b</sup> Z. Xiao<sup>f</sup> X. Cheng<sup>b</sup> X. Cheng<sup>b</sup> Z. Xiao<sup>f</sup> X. Zhao<sup>b</sup>

<sup>b</sup> Beijing Normal University, College of Global Change and Earth System Science, 2, China

<sup>f</sup> Beijing Normal University, College of Geography and Remote Sensing, 1, China

<sup>d</sup> Cold and Arid Regions Environmental and Engineering Research Institute., 4, 4, China

<sup>e</sup> Institute of Atmospheric Physics, CAS, 5, 5, China

<sup>a</sup> University of Maryland, Geography, 2181 LeFrak Hall, 20742, College Park, United States

<sup>c</sup> Institute of Remote Sensing Application, Chinese Academy of Sciences, 3, 3, China

**Technical Commission VII Symposium 2010**

**KEY WORDS:** Land, Vegetation, Production, Global, Multispectral

## ABSTRACT:

To support the global change studies and development of new generation earth system models, China launched the 863 key project entitled “generation and application of global products of essential land variables”. Its duration is from July 2009 - July 2012. The key component of this project is to develop the Global LAnd Surface Satellite (GLASS) system that will generate five land products: Leaf Area Index, Albedo, Emissivity, Downwelling Shortwave Radiation and Photosynthetically Active Radiation. The first three GLASS products will span from 1985-2010 with 1km and 5km spatial resolutions and 8-day temporal resolution, and the last two GLASS products will span from 2008-2010 with 3-hour temporal resolution and 5km spatial resolution. It will further improve the parameterization scheme of the key land surface processes and data assimilation technology, advance its simulation capability, and demonstrate the applications of these products to global environmental changes. This presentation will provide an overview of this project, including background, methodology, anticipated results and the latest progress.

**TOPIC:** Physical modeling and signatures

**ALTERNATIVE TOPIC:** Multi-spectral and hyperspectral remote sensing